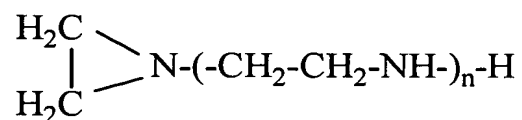


Claims

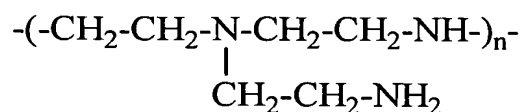
1. A laminate comprising a multi resin layer including at least three layers comprising adhesive resin layer (a)/barrier resin layer (b)/adhesive resin layer (a') coextrusion laminated onto a base paper coated with polyethylene imine such that said adhesive resin layer (a) is contacted with said coated surface of said base paper.

2. The laminate of claim 1, characterized in that said multi resin layer comprises at least four layers including a thermoplastic resin layer (c) provided outside said adhesive resin layer (a').

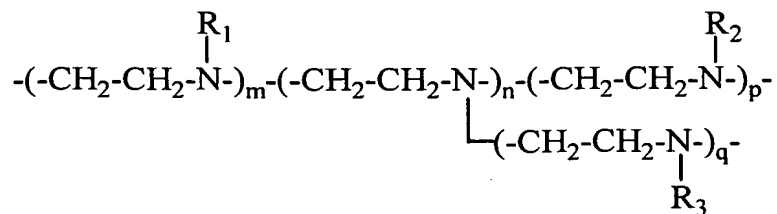
3. The laminate of claim 1 or 2, characterized in that the polyethylene imine is represented by the following formula:



4. The laminate of claim 1 or 2, characterized in that the polyethylene imine is represented by the following formula:



5. The laminate of claim 1 or 2, characterized in that the polyethylene imine is represented by the following formula:



wherein R₁ through R₃ each represent hydrogen, an alkyl group, alkenyl group, benzyl group, or a cyclic hydrocarbon residue.

6. The laminate of claim 1 or 2, characterized in that said adhesive resin layer (a) and said adhesive resin layer (a') comprise graft polymers obtained by graft polymerizing unsaturated carboxylic acid such as maleic acid or anhydride thereof, with polyolefin resin such as low-density polyethylene, straight chain low-density polyethylene, very-low-density polyethylene, or polypropylene.

7. The laminate of claim 1 or 2, characterized in that said adhesive resin layer (a) and said adhesive resin layer (a') comprise copolymers of olefin such as ethylene, with maleic acid, acrylic acid, methacrylic acid, vinyl acetate, acrylic acid ester, and methacrylic acid ester.

8. The laminate of claim 1 or 2, characterized in that said barrier resin layer (b) comprises any one of polyamide, polyester, polyvinylidene chloride, and ethylene-vinyl alcohol copolymer (so-called EVOH).

9. The laminate of claim 8, characterized in that the polyamide comprises any one of noncrystalline polyamide, nylon-6, nylon-66, and a copolymer of metaxylene diamine and dicarboxylic acid.

10. The laminate of claim 8, characterized in that the polyester comprises any one of polyethylene glycol terephthalate, polybutylene glycol terephthalate, and polyethylene glycol naphthalate.

11. The laminate of claim 8, characterized in that the EVOH is obtained by saponifying a copolymer of ethylene and vinyl ester, by using an alkali catalyst or the like;

that the EVOH has an ethylene content of 15 to 60mol%; and

that the vinyl ester component has a saponification degree of 90% or more.

12. The laminate of claim 11, characterized in that the EVOH has a melt flow rate (MFR) (based on JIS K7210 under a load of 2,160g at 210°C) of 1 to 45g/10min.

13. The laminate of claim 1 or 2, characterized in that said adhesive resin layer (a) has a thickness set at 1 μ m or more, said barrier resin layer (b) has a thickness set at 0.5 to 30 μ m, and said adhesive resin layer (a') has a thickness set at 0.5 μ m or more.

14. The laminate of claim 2, characterized in that said thermoplastic resin layer (c) has a thickness set at 2 μ m or more.

15. The laminate of claim 2, characterized in that said thermoplastic resin layer (c) comprises low-density polyethylene, straight chain low-density polyethylene, very-low-density polyethylene or polypropylene.

16. The laminate of claim 15, characterized in that

said thermoplastic resin layer (c) comprises a polyolefin resin having MFR in a range of 0.5 to 20g/10min.

17. The laminate of claim 1, 2 or 6, characterized in that said adhesive resin layer (a) is adapted to be bonded to said base paper coated with polyethylene imine, and has an MFR (under a load of 2,160g at 190°C) of 0.5 to 20g/10min.

18. The laminate of any one of claims 1 through 17, characterized in that the temperature of the molten resin layer upon coextrusion lamination is set at 290°C or lower at a die outlet.

19. The laminate of any one of claims 1 through 18, characterized by a heat sealing layer provided on said base paper at a position other than the coextrusion laminated surface thereof.

20. The laminate of claim 19, characterized in that said heat sealing layer comprises a polyolefin resin having an MFR set in a range of 0.5 to 20g/10min and a thickness set in a range of 3 to 100µm.

21. The laminate of any one of claims 1 through 20, characterized by a contents-contacting layer provided on the coextrusion laminated surface.

22. The laminate of claim 21 characterized in that said contents-contacting layer is laminated on the coextrusion laminated surface, by an extrusion laminating method.

23. The laminate of claim 21, characterized in that

said contents-contacting layer is formed into a single layered or multi layered film, and laminated onto said coextrusion laminated multi resin layer by a sandwich laminating method.

24. The laminate of claim 21, characterized in that said contents-contacting layer is formed into a single layered or multi layered film, and laminated onto the coextrusion laminated surface via another resin by a sandwich laminating method.

25. The laminate of any one of claims 21 through 24, characterized in that said contents-contacting layer comprises a polyolefin resin or sealing polyester.

26. A paper container obtained by forming said laminate of any one of claims 1 through 25.

27. A package comprising said paper container of claim 26 containing contents filled therein.

28. The package of claim 27, wherein the contents are soft drink.